

DECLARATION AND POWER OF ATTORNEY

REGULAR OR DESIGN APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

ZINC OXIDE FILMS CONTAINING P-TYPE DOPANT & PROCESS
FOR PREPARING SAME

the specification of which:

(check one)

☒ [x] is attached hereto

☐ [] was filed on _____ as Application Serial No.
_____, and was amended on _____.

☐ [] was described and claimed in PCT International Application
No. _____, filed on _____ and as amended
under PCT Article 19 on _____, if any.

ACKNOWLEDGEMENT OF REVIEW OF PAPERS AND DUTY OF CANDOR

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations §1.56.

PRIORITY CLAIM

I hereby claim foreign priority benefits under Title 35, United States Code, §119 (a) - (d) or §365(b) of any foreign application for patent or inventor's certificate, or §365(a) of any PCT application which designates at least one country other than the United States of America, listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Priority Claimed

_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)
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Priority Not Claimed

ANY FOREIGN APPLICATION(S), ON THE SAME SUBJECT MATTER WHICH HAS A FILING DATE EARLIER THAN THE EARLIEST APPLICATION FROM WHICH PRIORITY IS CLAIMED

_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)
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_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)
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_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)
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CLAIM FOR BENEFIT OF PROVISIONAL APPLICATION(S)

I hereby claim the benefit under Title 35, United States Code, §119(e) of any United States provisional application(s) listed below.

_____ (Application Number)	_____ (Filing Date)
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_____ (Application Number)	_____ (Filing Date)
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**CLAIM FOR BENEFIT OF EARLIER U.S. APPLICATION(S)
UNDER 35 U.S.C. 120**

(complete this part only if this is a divisional,
continuation or CIP application)

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s), or §365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code §112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:

<u>09/128,516</u>	<u>U.S.</u>	<u>08/03/98</u>
(Number)	(Country)	(Day/Month/Year Filed)

<u>09/364,809</u>	<u>U.S.</u>	<u>07/30/99</u>
(Number)	(Country)	(Day/Month/Year Filed)

POWER OF ATTORNEY

I hereby appoint the following attorneys to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith: Irving Powers (15,700), Donald G. Leavitt (17,626), John K. Roedel, Jr. (25,914), Michael E. Godar (28,416), Edward J. Hejlek (31,525), William E. Lahey (26,757), Richard G. Heywood (18,224), Frank R. Agovino (27,416), Kurt F. James (33,716), G. Harley Blosser (33,650), Paul I. J. Fleischut (35,513), Vincent M. Keil (36,838), Robert M. Evans, Jr. (36,794), Robert M. Bain (36,736), Joseph A. Schaper (30,493), Kathleen M. Petrillo (35,076), David E. Crawford, Jr. (38,118), Paul A. Maddock (37,877), Scott A. Williams (39,876), Richard L. Bridge (40,529), David M. Gryte (41,809), Christopher M. Goff (41,785), James E. Butler (40,931), Derick E. Allen (43,468), Matthew L. Cutler (43,574), Michael G. Munsell (43,820), Robert J. Lewis (27,210), Patrick S. Eagleman (44,665), Karen Y. Hui (44,785), Anthony R. Kinney (44,834), and Brian P. Klein (P-44,837), all of the law firm of SENNIGER, POWERS, LEAVITT & ROEDEL; One Metropolitan Square, 16th Floor, St. Louis, Missouri 63102.

Send Correspondence To:

Direct Telephone Calls To:

Customer Number: 000321

Christopher M. Goff
(314) 231-5400

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first inventor Henry W. White

Inventor's signature Henry W. White Date 12/15/99
Residence Columbia, MO Citizenship U.S.
Post Office address 601 Maplewood Drive
Columbia, Missouri 65211

Full name of sole or first inventor Shen ZHU

Inventor's signature _____ Date _____
Residence Huntsville, AL Citizenship Peoples Republic of China
Post Office address 1817 Gallop Drive
Huntsville, Alabama 35803

Full name of sole or first inventor Yungyeul RYU

Inventor's signature Yungyeul RYU Date 12/15/99
Residence Columbia, MO Citizenship South Korea
Post Office address 1602 Kitty Hawk, Apt. 3
Columbia, Missouri 65202

Send Correspondence To:

Direct Telephone Calls To:

Customer Number: 000321

Christopher M. Goff
(314) 231-5400

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first inventor Henry W. White

Inventor's signature _____ Date _____

Residence Columbia, MO Citizenship U.S.

Post Office address 601 Maplewood Drive
Columbia, Missouri 65211

Full name of sole or first inventor Shen ZHU

Inventor's signature  Date 12/20/99

Residence Huntsville, AL Citizenship Peoples Republic of China

Post Office address 1817 Gallop Drive
Huntsville, Alabama 35803

Full name of sole or first inventor Yungryel RYU

Inventor's signature _____ Date _____

Residence Columbia, MO Citizenship South Korea

Post Office address 1602 Kitty Hawk, Apt. 3
Columbia, Missouri 65202



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

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EJH
CML

RECEIVED APR 21 2000



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APRIL 14, 2000

PTAS

SENNIGER, POWERS, LEAVITT
& ROEDEL
ONE METROPOLITAN SQUARE
16TH FLOOR
ST. LOUIS, MO 63102

UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 01/10/2000

REEL/FRAME: 010527/0846
NUMBER OF PAGES: 7

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

WHITE, HENRY W.

DOC DATE: 12/15/1999

ASSIGNOR:

ZHU, SHEN

DOC DATE: 12/20/1999

ASSIGNOR:

RYU, YUNGRYEL

DOC DATE: 12/15/1999

ASSIGNEE:

CURATORS OF THE UNIVERSITY OF
MISSOURI, THE
615 LOCUST STREET BUILDING
COLUMBIA, MISSOURI 65211-1400

SERIAL NUMBER: 09439529
PATENT NUMBER:

FILING DATE: 11/12/1999
ISSUE DATE:

[Handwritten signature]

010527/0846 PAGE 2

PAULA MCCRAY, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

Attorney Docket No.

UMO 1512

RECORDATION FORM
PATENTS C

101258306

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original document(s) or copy thereof.

1. Name of conveying party(ies) (assignor(s)):

Henry W. White, Shen ZHU, Yungryel RYU

Additional name(s) of conveying party(ies) attached? ☐ yes ☒ no

2. Name and Address of Party(ies) receiving an interest (assignee(s)):

Name: The Curators of the University of Missouri

Address: 615 Locust Street Building

City: Columbia

State: Missouri

Zip: 65211-1400

Country: U.S.

Additional name(s) & address(es) attached? ☐ yes ☒ no

3. Nature of Conveyance:

☒ Assignment☐ Merger☐ Change of Name☐ Verified Translation☐ Security Agreement☐ Other

Execution Date:

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date(s) of the application is:

A. Patent Application No(s).

B. Patent No(s).

09/439,529

Others on additional sheet(s) attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Senniger, Powers, Leavitt & Roedel

One Metropolitan Square

16th Floor

St. Louis, Missouri 63102

(314) 231-5400 (telephone)

6. Total number of applications and patents involved:

Application(s) 1 + Patent(s): 0 = Total 17. Total Fee (37 CFR 3.41) \$ 40.00☒ Enclosed☐ Authorized to be charged to deposit account8. Deposit Account Number: 19-1345

(Duplicate copy of this sheet attached)

☒ Charge any underpayment or credit any overpayment to above Deposit Account

DO NOT USE THIS SPACE

9. Statement and signature

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Name of Person Signing

Signature

1-3-2000

Date

Total number of pages including cover sheet, attachments, and document:

12/14/2000 TTOM11 00000057 09439529

11 TC:581

40.00 DP

ASSIGNMENT

WHEREAS, We Henry W. White of Columbia, Missouri, Shen ZHU of Huntsville, Alabama and Yungryel RYU of Columbia, Missouri, have invented an improvement in ZINC OXIDE FILMS CONTAINING P-TYPE DOPANT AND PROCESS FOR PREPARING SAME (File UMO 1512) and have executed an application for a United States patent based thereon Serial No. 09/439,529, filed November 12, 1999;

AND, WHEREAS, The Curators of the University of Missouri, a corporation of the State of Missouri (hereinafter referred to as "ASSIGNEE") is desirous of acquiring certain rights thereunder;

NOW, THEREFORE, for one dollar and other good and valuable consideration, receipt of all of which is hereby acknowledged, we have agreed to and do hereby sell, assign and transfer unto said ASSIGNEE the entire right, title and interest in and throughout the United States of America (including its territories and dependencies) and all countries foreign thereto in and to said invention, said United States application, any other United States applications (including provisional, non-provisional, divisional, continuing, or reissue applications) based in whole or in part on said United States application or in whole or in part on said invention, any foreign applications based in whole or in part on any of the aforesaid United States application or in whole or in part on said invention, and any and all patents (including extensions thereof) of any country which have been or may be granted on any of the aforesaid applications or on said invention or any part thereof;

UMO 1512
PATENT

TO BE HELD AND ENJOYED by said ASSIGNEE, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by us had no sale and assignment of said interest been made;

AND We hereby authorize and request the Commissioner of Patents of the United States of America to issue any and all United States patents which may be granted upon said United States applications or any of them, or upon said invention or any part thereof, to said ASSIGNEE;

AND We hereby jointly and severally agree for ourselves and for our respective heirs, executors and administrators, to execute without further consideration any further lawful documents and any further assurances, and any provisional, non-provisional, divisional, continuing, reissue, or other applications for patents of any country, that may be deemed necessary by said ASSIGNEE fully to secure to said ASSIGNEE its interest as aforesaid in and to said invention or any part thereof, and in and to said several patents or any of them;

AND We hereby jointly and severally covenant for ourselves and our respective legal representatives that we have granted no right or license to make, use or sell said invention, to anyone except said ASSIGNEE, that prior to the execution of this deed our right, title and interest in said invention had not been otherwise encumbered, and that we have not executed and will not execute any instrument in conflict herewith.

IN WITNESS WHEREOF, we have hereunto set our hands.

Henry W. White
Henry W. White

Shen ZHU

Yungryel RYU
Yungryel RYU

ACKNOWLEDGMENT

STATE OF Missouri)
COUNTY OF Boone)

On this 15th day of December 1997, before me, a Notary Public, personally appeared Henry W. White to me known to be the person described in and who executed the foregoing assignment and acknowledged that he executed same as his free act and deed.

IN TESTIMONY WHEREOF, I have hereunto set my hand and seal the date and year last above written.

Marla L. Barrett
Notary Public

My Commission Expires:

July 7, 2001

MARLA L. BARRETT
Notary Public - Notary Seal
State of Missouri
County of Boone
My Commission Expires July 7, 2001

ACKNOWLEDGMENT

STATE OF _____)
)
COUNTY OF _____)

On this ____ day of _____, before me, a Notary Public, personally appeared Shen ZHU to me known to be the person described in and who executed the foregoing assignment and acknowledged that he executed same as his free act and deed.

IN TESTIMONY WHEREOF, I have hereunto set my hand and seal the date and year last above written.

Notary Public

My Commission Expires:

ACKNOWLEDGMENT

STATE OF Missouri)
)
COUNTY OF Boone)

On this 15th day of December 1999, before me, a Notary Public, personally appeared Yungryel RYU to me known to be the person described in and who executed the foregoing assignment and acknowledged that he executed same as his free act and deed.

IN TESTIMONY WHEREOF, I have hereunto set my hand and seal the date and year last above written.

Marla L Barrett
Notary Public

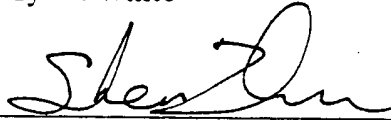
My Commission Expires:

July 7, 2001

MARLA L. BARRETT
Notary Public - Notary Seal
State of Missouri
County of Boone
My Commission Expires July 7, 2001

IN WITNESS WHEREOF, we have hereunto set our hands.

Henry W. White



Shen ZHU

Yungryel RYU

ACKNOWLEDGMENT

STATE OF _____)

COUNTY OF _____)

On this ____ day of _____, before me, a Notary Public, personally appeared Henry W. White to me known to be the person described in and who executed the foregoing assignment and acknowledged that he executed same as his free act and deed.

IN TESTIMONY WHEREOF, I have hereunto set my hand and seal the date and year last above written.

Notary Public

My Commission Expires:

ACKNOWLEDGMENT

STATE OF Alabama)
)
COUNTY OF Madison)

On this 20 day of December 1999, before me, a Notary Public, personally appeared Shen ZHU to me known to be the person described in and who executed the foregoing assignment and acknowledged that he executed same as his free act and deed.

IN TESTIMONY WHEREOF, I have hereunto set my hand and seal the date and year last above written.

Don Kindred
Notary Public

My Commission Expires:

ACKNOWLEDGMENT

STATE OF _____)
)
COUNTY OF _____)

On this _____ day of _____, before me, a Notary Public, personally appeared Yungryel RYU to me known to be the person described in and who executed the foregoing assignment and acknowledged that he executed same as his free act and deed.

IN TESTIMONY WHEREOF, I have hereunto set my hand and seal the date and year last above written.

Notary Public

My Commission Expires:
